UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,253	07/03/2001	Claude Basso	RAL920000099US1	1929

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EXAMINER
NGUYEN, CINDY

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/898,253	BASSO ET AL.
	Examiner	Art Unit	
	Cindy Nguyen	2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _06/14/05_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _9-24_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _9--24_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _03 July 2001_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6) ☐ Other: .

DETAILED ACTION

Response to Arguments(filed 03/14/05)

Applicant's arguments have been considered but are moot in view of the new

ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9-12, 14-20 and 22-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Guha (US 6539373) in view of Irwin (US 6052683).

Regarding claims 9 and 17, Guha discloses: a system and a computer program

product for performing a pattern match search for a data string having a plurality of

characters separated by delimiters, said method comprising: means defining a subset of

characters as delimiters such that all remaining characters are defined as non-delimiters

(col. 8, lines 10-22, Guha);

Means for constructing a search key by: generating a full match search

increment comprising the binary representation of a data string element, wherein said

data string element includes a plurality of non-delimiters between a pair of delimiters

(col. 8, lines 35-42, Guha); and

concatenating a pattern search prefix to said full match search increment to form

said search key, wherein said pattern search prefix is a cumulative pattern search result

of each previous full match search increment (col. 8, lines 35-60, Guha);

However, Guha didn't discloses: Means for performing a full match search within

a lookup table utilizing said search key; means for returning to said constructing a

search key, in response to finding a matching pattern within said lookup table; means

for utilizing previous full match search result to process said data string in response to

not finding a matching pattern within said lookup table.   On the other hand, Irwin

discloses: Means for performing a full match search within a lookup table utilizing said

search key (col. 6, 38-63, Irwin); means for returning to said constructing a search key,

in response to finding a matching pattern within said lookup table (col. 6, lines 52-63,

Irwin); means for utilizing previous full match search result to process said data string in

response to not finding a matching pattern within said lookup table (col. 9, lines 10-32,

Irwin). Thus, at the time invention was made, it would have been obvious to a person of

ordinary skill in the art to include the step for performing a full match search within a

lookup table utilizing said search key; for returning to said constructing a search key, in

response to finding a matching pattern within said lookup table; for utilizing previous full

match search result to process said data string in response to not finding a matching

pattern within said lookup table in the system of A as taught by B. The motivation being

to enable the system provide an apparatus for performing an address lookup to find a

longest matching prefix for an N-bit input address in a packet data communication system.

Regarding claims 10 and 18, most of the limitations of these claims have been noted in the rejection of claims 9 and 17 above, respectively. In addition, Guha/Irwin discloses: wherein said system further includes processing means for pointing to a character within said data string prior to constructing a search key (col. 9, lines 10-30, Guha).

Regarding claims 11 and 19, most of the limitations of these claims have been noted in the rejection of claims 10 and 18 above, respectively. In addition, Guha/Irwin discloses: wherein said constructing a search key further comprises:

Means for evaluating said character within said data string to determine whether or not said character is a delimiter (col. 7, lines 59 to col. 8, lines 22, Guha);

Means for in response to a determination that said character within said data string being a delimiter: delivering a full match search increment into a search key register, wherein said search increment comprises a binary representation of all non-delimiters between said delimiter and an immediately preceding delimiter (col. 8, lines 10-22, Guha); and

concatenating said pattern search prefix to said search increment within said search key element (col. 8, lines 10-22);

means in response to said character within said data string not being a delimiter

for appending a binary representation of said search increment; and incrementing said

pointer (col. 9, lines 10-30, Guha).

Regarding claims 12 and 20, most of the limitations of these claims have been

noted in the rejection of claims 9 and 17 above, respectively. In addition, Guha/Irwin

discloses: wherein said system further includes means for incrementing said search key

to a next URL data string element in response to finding said matching pattern (col. 7,

lines 46-57, Guha).

Regarding claims 14 and 22, most of the limitations of these claims have been

noted in the rejection of claims 9 and 17 above, respectively. In addition, Guha/Irwin

discloses: wherein said data string is a Universal Resource Indicator address, and said

data string element is a URI element (col. 7, lines 59 to col. 8, lines 22, Guha).

Regarding claims 15 and 23, most of the limitations of these claims have been

noted in the rejection of claims 14 and 22, above, respectively. In addition, Guha/Irwin

discloses: wherein said delimiters include period characters or slash characters (col. 7,

lines 59 to col. 8, lines 22, Guha).

Regarding claims16, 24, most of the limitations of these claims have been noted

in the rejection of claims 14 and 22, above, respectively. In addition, Guha/Irwin

discloses: wherein said step of constructing a search key further include: means for

scanning an IP data packet to determine a first URI element to by parsed (col. 7, lines

59 to col. 8, lines 22, Guha); means for initializing a URI pointer to a first character

within said first URI element (col. 7, lines 59 to col. 8, lines 22, Guha); and means for

initializing said pattern search prefix to zero (col. 7, lines 59 to col. 8, lines 22, Guha).

Claims 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Guha (US 6539373) in view of Irwin (US 6052683) in further in view of

Bronstein et al. (US 6735670) (Bronstein).

Regarding claims13 and 21, most of the limitations of these claims have been

noted in the rejection of claims 9 and 17 above, respectively. In addition, Guha/Irwin

discloses: determining whether or not a full match for said search key exists within said

a hash table by: hashing said search key to produce a hash key result (col. 8, lines 35-

60, Guha). However, Guha/Irwin didn't disclose: indexing a hash table utilizing said

hash key result to find a matching stored pattern; and resolving collisions in said hash

table utilizing a pattern search control block. On the other hand, Bronstein discloses:

disclose: indexing a hash table utilizing said hash key result to find a matching stored

pattern (col. 7, lines35-53, Bronstein); resolving collisions in said hash table utilizing a

pattern search control block (col. 9, lines 39-53, Bronstein). Thus, at the time invention

was made, it would have been obvious to a person of ordinary skill in the art to include

step for indexing a hash table and resolving collisions in said hash table utilizing a

pattern search control block in the system of Guha/Irwin as taught by Bronstein. The

motivation being to enable the system provide the function operative to generated an

index in accordance with a key input, a hash table having a plurality of entries and

adapted to store the elements in accordance with their corresponding indexes, and

apply the index to the hash table and us the element generated in the event.

1.   *Contact Information*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The

examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-746-7239 for regular

communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3900.

Cindy Nguyen
August 24, 2005

FRANTZ COBY
PRIMARY EXAMINER